

REMARKS

This paper is being submitted in response to the Final Office Action mailed in the application on October 20, 2005. As set forth in the Interview Summary accompanying the office action and the first paragraph of the office action on page 2 thereof, the statutory period for reply was reset¹ to expire three (3) months from the mailing date of the final office action dated October 20, 2005.

Claims 47 - 54 have been canceled without prejudice. Claims 41 and 55 have been amended. Claims 58 - 63 have been amended. Accordingly, claims 41, 43, 55 and 58-63 are presented for consideration.

The Examiner has rejected applicant's claims 41, 43 and 47-55 under 35 U.S.C. §103(a) as being unpatentable over the Pfeiffer, et al. (U.S. 5,146,592) patent in view of the Hamada, et al. (U.S. 5,826,035) patent. Claims 47 - 54 have been canceled. With respect to applicant's claims 41, 43 and 55, as amended, the Examiner's rejections are respectfully traversed.

Applicant's independent claim 41 has been amended to recite an image capture apparatus comprising an image capture unit adapted to capture image data, a memory adapted to store the image data captured by the image capture unit, an image compression unit adapted to compress the image data stored in the memory, an image display unit adapted to display an image using the image data stored in the memory, a control unit adapted to control the image capture apparatus, a refresh control unit adapted to refresh the memory, and an arbitration unit adapted (a) to assign a higher priority to a process of providing image data from the image capture unit to the memory than a process of refreshing the memory and a process of accessing the memory by the control unit, (b) to assign a higher priority to a process of refreshing the

¹ The final office action originally was mailed July 27, 2005, but that mailing improperly contained the non-final rejection that was mailed January 6, 2005.

memory and a process of accessing the memory by the control unit than a process of compressing image data stored in the memory by the image compression unit, (c) to assign a higher priority to a process of providing image data from the memory to the image display unit than a process of refreshing the memory and a process of accessing the memory by the control unit, and (d) to assign a higher priority to a process of refreshing the memory than a process of accessing the memory by the control unit.

Applicant submits that the features recited in applicant's independent claim 41 are neither taught nor suggested by the cited Pfeiffer, et al. and Hamada, et al. patents. In the Office Action, the Examiner has asserted that the Pfeiffer, et al. patent teaches,

"The image algorithm processor (66) is viewed by the examiner as the control unit. ...that the screen refresh function of the video DRAM shift registers is given top priority (which is viewed as the process of storing the image data), followed by refresh of the DRAM cells, and then address request from the image algorithm processor. The examiner views the image capture unit as being the combination of the video image transducer and the digitizer and mass storage (18). As depicted in Figure 1, the video image computer controls the image capture unit. Therefore, the video image computer is viewed by the examiner as the control unit adapted to control the image capture apparatus using the memory." (office action, page 3, line 9 to page 4, line 2).

First, as set forth in the foregoing cited passage, the Examiner deems video image computer 22 which includes the image algorithm processor 66, shown in Figure 1, of the Pfeiffer, et al. patent as corresponding to applicant's recited control unit which controls the image capture apparatus, that is, video image transducer 10 shown in Figure 1. Therefore, as is clear from Figure 1 of the Pfeiffer, et al. patent, for a captured image that is stored in mass data storage 18 to be displayed on monitor 28, video image computer 22 accesses the data stored within storage 18, stores and processes it, and then supplies the image data to monitor 28 for display thereon. In agreement with this understanding of Pfeiffer, et al., the Examiner states that "when the image computer receives a request to refresh the video screen with new data, the

memory that is digitized in the image capture unit (10 and 18) is read via the data bus unit to the image memory (84).” (Office Action, page 4, lines 2-4). However, applicant’s claim 41, as amended, recites that the arbitration unit assigns the following priorities:

“(a) ... assign[s] a higher priority to a process of providing image data from the image capture unit to the memory than ... a process of accessing the memory by the control unit”;

“(c) ... assign[s] a higher priority to a process of providing image data from the memory to the image display unit than ... a process of accessing the memory by the control unit;”

“(d) ... assign[s] a higher priority to a process of refreshing the memory than a process of accessing the memory by the control unit.”

Accordingly, the control unit accessing the memory is given a lower priority than the process of providing image data from the image capture unit to the memory, the process of providing image data from the memory to the image display unit and the process of refreshing the memory. Hence, these activities are occurring within the claimed invention prior to the control unit’s accessing of the memory.

In contrast, the Pfeiffer, et al. patent provides a “control unit” in the form of video image computer 22 that accesses the memory 82 or 84 concurrently with the image data being provided by the image capture unit to the memory 82 or 84 as during refreshing the memory for refreshing the video screen or monitor 28 and prior to the image data being sent from the memory 82 or 84 to the monitor 28. (see, for example, Col. 8, lines 33-60, of the Pfeiffer, et al. patent for image data transfer from the image capture unit to the memory; see, also, Col. 11, lines 1-18, for image data transfer from the memory to the video monitor). Thus, the aforesaid processes of the “control unit,” accessing a memory in the Pfeiffer, et al. patent, of necessity, are of the same or higher priority than the processes of providing data to the memory from the image capture unit, refreshing the memory and providing data from the memory to the

monitor. Accordingly, the video image computer 22 or "control unit" in the Pfeiffer, et al. patent does not at all correspond to applicant's claimed "control unit."

Therefore, the Pfeiffer, et al. patent does not provide for an arbitration unit that provides the process priorities as set forth in applicant's claim 41, as amended. As for the Hamada, et al. patent, this patent does not disclose the aforementioned deficiencies of the Pfeiffer, et al. patent. The Hamada, et al. patent principally discloses a system in which image data is first stored in a memory, then it is read from the memory and displayed on a projection screen. The image data can then be compressed or expanded (column 8, line 54 to column 9, line 5). Accordingly, applicant's amended claim 41 is patentably distinct and unobvious over the combination of the Pfeiffer, et al. and Hamada, et al. patents.

In view of the foregoing, it is submitted that applicant's claim 41, and claims 43 and 55 dependent thereon, patentably distinguish over the cited art of record. It is therefore requested that the rejection of claims 41, 43 and 55 under 35 U.S.C. §103(a) be withdrawn.

New claims 58 - 63 are presented. New independent claim 58 recites an image capture apparatus similar to the apparatus recited in claim 41, but claim 58 calls for an image processing unit adapted to rotate (as opposed to compressing the image data as recited in claim 41) the image data stored in the memory. Likewise, new independent claim 61 recites an image capture apparatus similar to the apparatus recited in claim 41, but claim 61 calls for an image processing unit adapted to change an image size of the image data stored in the memory. Accordingly, since new independent claims 58 and 61 recite all of the other features set forth in claim 41, as amended, the foregoing discussion of claim 41 is equally applicable to claims 58 and 61, as well as their respective dependent claims 59-60 and 62-63. Therefore, new claims

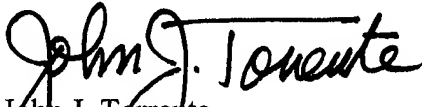
58-63 are patentably distinct and unobvious over the prior art of record. The allowance of new claims 58-63 is solicited.

Reconsideration and allowance of the claims are respectfully requested. If the Examiner believes that an interview would expedite consideration of this Amendment or of the application, a request is made that the Examiner telephone applicant's counsel at (212) 790-9200.

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Respectfully submitted,

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